FIG. 1

100

Data Warehouse 104

CDR table 114

Profile table 110

Load CDRs 118

store back

OLAP SERVER 108

Profile Engine 152

120

Profile snapshot cube 134

Profile cube 130

Updated profile cube 138

Calling pattern cubs of individual customer 140

Report / analysis/visualization tools

OLAP SERVER 108

OLAP TOOLS 150

OLAP-BASED PROFILE ENGINE   152

PROFILE BUILDER AND UPDATE MODULE (PBUM) 154

BEHAVIOR PATTERN GENERATION MODULE (BPGM) 158

DATA MANAGEMENT MODULE (DMM) 160

VOLUME-BASED TO PROBABILITY-BASED CONVERSION MODULE (VPCM) 164

BEHAVIOR PATTERN COMPARISON MODULE (BPCM) 168

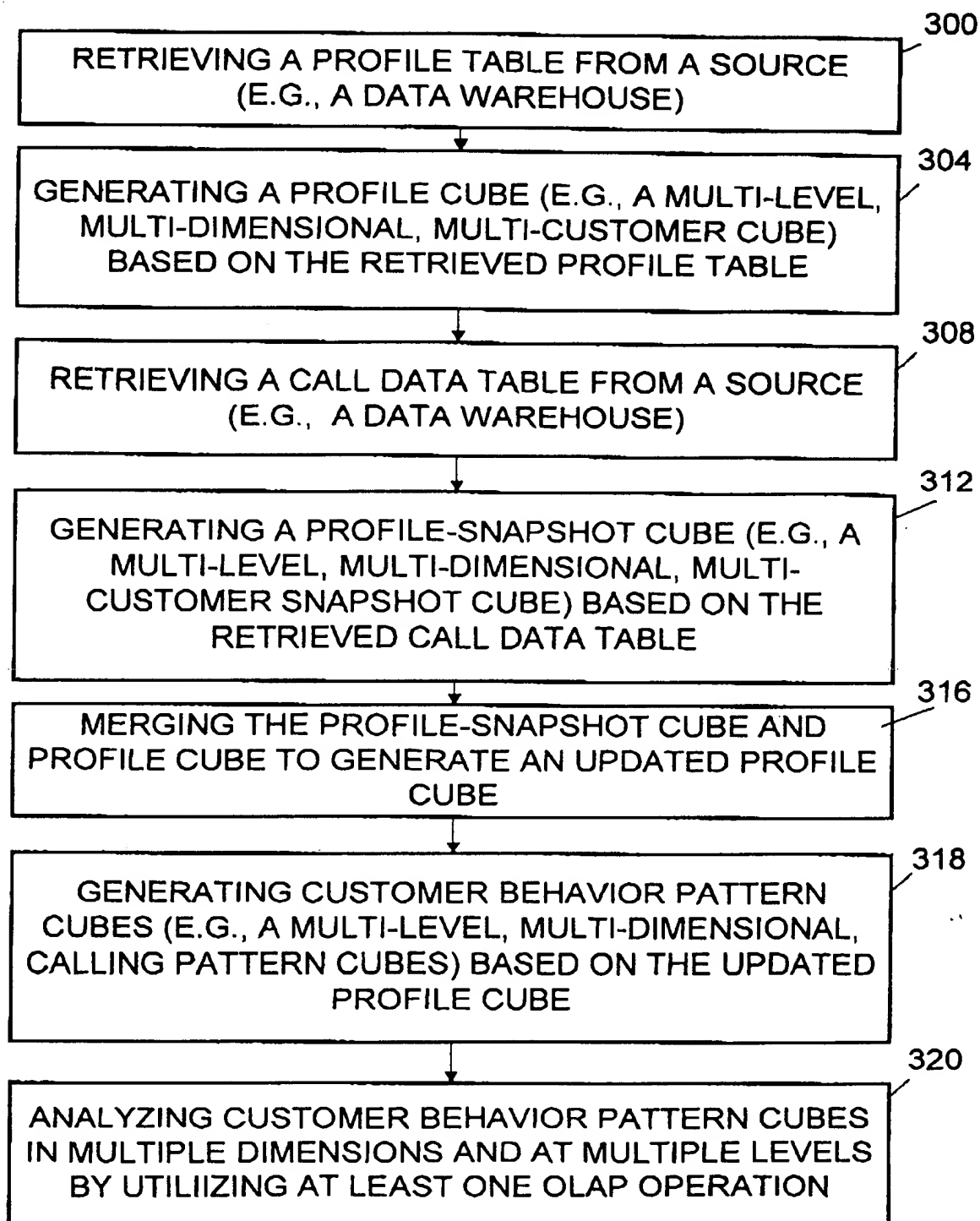## FIG. 2

RETRIEVING A PROFILE TABLE FROM A SOURCE (E.G., A DATA WAREHOUSE) — 300

GENERATING A PROFILE CUBE (E.G., A MULTI-LEVEL, MULTI-DIMENSIONAL, MULTI-CUSTOMER CUBE) BASED ON THE RETRIEVED PROFILE TABLE — 304

RETRIEVING A CALL DATA TABLE FROM A SOURCE (E.G., A DATA WAREHOUSE) — 308

GENERATING A PROFILE-SNAPSHOT CUBE (E.G., A MULTI-LEVEL, MULTI-DIMENSIONAL, MULTI-CUSTOMER SNAPSHOT CUBE) BASED ON THE RETRIEVED CALL DATA TABLE — 312

MERGING THE PROFILE-SNAPSHOT CUBE AND PROFILE CUBE TO GENERATE AN UPDATED PROFILE CUBE — 316

GENERATING CUSTOMER BEHAVIOR PATTERN CUBES (E.G., A MULTI-LEVEL, MULTI-DIMENSIONAL, CALLING PATTERN CUBES) BASED ON THE UPDATED PROFILE CUBE — 318

ANALYZING CUSTOMER BEHAVIOR PATTERN CUBES IN MULTIPLE DIMENSIONS AND AT MULTIPLE LEVELS BY UTILIIZING AT LEAST ONE OLAP OPERATION — 320

FIG. 3

Cpri ~410

morning	0.5
afternoon	0.1
evening	0.4

V ~400

	morning	afternoon	evening
short	350	30	80
medium	100	40	200
long	50	30	120

Cp ~420

	morning	afternoon	evening
short	0.7	0.3	0.2
medium	0.2	0.4	0.5
long	0.1	0.3	0.3

Ccon ~430

	morning	afternoon	evening
short	0.35	0.03	0.08
medium	0.1	0.04	0.2
long	0.05	0.03	0.12

FIG.4